Lower Snake River Basin

The Lower Snake River Basin includes all areas draining into the Snake River from river mile 262, about 11 miles below Oxbow Dam, to the mouth. The area totals 35,081 square miles of which 5,562 square miles are in southeastern Washington, 24,562 square miles are in central Idaho, and 4,956 square miles are in northeastern Oregon. The northwest section of the basin is characterized by wide expanses of dry flat land, 1,000 to 2,000 feet in elevation and cut by shallow canyons along the drainage courses. In the eastern section, foothills range from 2,000 to 3,000 feet in elevation. Wide valleys are bordered by higher timbered hills. The remainder of the basin, about 80 percent of the area, is largely covered by stands of timber. The Salmon and Clearwater Rivers, tributaries of the Snake, are surrounded by rugged topography. Basin elevations range from 300 feet at the Snake's mouth, to 12,000 feet in the Yellowjacket and Salmon River Mountains. Because of the extreme range of elevations, climate and growing seasons are variable. Normal annual precipitation over the entire area is about 28 inches. Periods of high temperatures in summer and sub-zero conditions in winter occur at all elevations.

Ice Harbor Lock and Dam

Completed Multi-purpose Project (Walla Walla District) In 1945, Ice Harbor became the first of four dams authorized by Congress for construction on the Snake River. The dam is located 9.7 miles upstream from the mouth of the river, at the head of Lake Wallula behind McNary Dam. The project includes a navigational lock, powerhouse, spillway, fish passage way, and non-overflow sections. The structure is 2,790 feet long and, between average upper and lower water levels, 100 feet high. The powerhouse has three 90,000-kilowatt and three 111,000-kilowatt generating units in operation. Total capacity is 603,000 kilowatts. The gate-controlled spillway has a crest elevation of 391 feet and is 610 feet long. A fish ladder on each shore allows migratory fish to swim past the dam. A fish attraction system across the downstream face of the powerhouse and special facilities at each end of the spillway attract the fish to the ladder. Lake Sacajawea, with a surface area of 9,200 acres, extends navigation about 32 miles upstream to Lower Monumental Lock and Dam. In addition, the lake reduces the pumping lift required to irrigate adjacent lands. In 1992, over 516,030 people visited the project and recreation areas along the lake. The project began operation in December 1961 with three power units in place. With the addition of three more units, construction costs through September 1995 totaled $187,758,713 and $114,639,316 for operation and maintenance. From the start of production in February 1962 through September 1995, 71.1 billion kilowatt-hours of saleable electric energy were generated. Revenues from power sales by Bonneville Power Administration are returned to the U.S. Treasury to repay, with interest, construction, operation, and maintenance costs of the

project.

Lewiston to Johnson's Bar Landing

Navigation Project (Walla Walla District) Work on the 92-mile reach of Snake River between Lewiston and Johnson's Bar Landing was first authorized in 1902, in 1910, and again in 1935. Boulders and other obstructions were removed from the channel. In 1949, a wing dam was constructed from the bank into the stream to provide a greater depth over the Temperance Creek Rapids, located about eight miles downstream from Johnson's Bar Landing. The Snake River from Lewiston and Johnson's Bar Landing provides access and mail service to the residents of the Hells Canyon area, mostly by launch. River launches transport animal feeds, household goods, and groceries upstream, and wool and other cargo downstream. Nearly 4,000 people are transported annually into the canyon reach on sight-seeing expeditions. Pleasure boating on this white-water reach of the Snake River has also increased in recent years. In 1992, boaters spent more than 44,500 recreation days on the river. Because of very low flow releases from upstream storage during some periods of the summer, the Federal Power Commission licenses for the Idaho Power Company's projects in Hells Canyon have been under review. It has been ruled that the licenses shall remain unchanged.

Palouse River, Colfax

Completed Flood Control Project (Walla Walla District) The project provides flood protection for the town of Colfax and vicinity. Located on the main stem of the North and South Forks of the Palouse River, the project includes a portion of Spring Flat Creek, a tributary stream, all within the city of Colfax, WA. The existing project consists of 3,470 feet of concrete-lined tunnel, 4,910 feet of revetted channel, and 2,330 feet of unrevetted channel and drainage structures. It was authorized by the Flood Control Act of 1944. Completed in two units, the project consists of channel enlargement and construction of concrete channel lining, levees, floodwalls, and rock revetments. Work on unit one, completed in November 1963, concentrated on the main stem of the Palouse River upstream and downstream from its confluence with the South Fork. The federal cost was $5,810,240 and local costs were $298,000. The project is now maintained by the town of Colfax. Flood damages prevented through September 1992 were $5,508,000.

Little Goose Lock and Dam - Lake Bryan

Completed Multi-purpose Project (Walla Walla District) The dam is located 70.3 miles upstream from the mouth of the Snake River, at the head of the lake behind Lower Monumental Dam. The project has a navigation lock, a 512-foot-long gate-controlled spillway, a powerhouse, and a fish ladder with entrances on each shore. The dam's overall length is 2,670 feet, with a hydraulic

height of 98 feet. Commerce through the navigation lock totaled 3,542,685 tons in 1994. About 202,100 people visited the project's recreation areas in 1994. Lake Bryan behind the dam was filled in February 1970, and the lock was opened in May of the same year. The powerhouse has six units, each rated at 135,000 kilowatts, for a total capacity of 810,000 kilowatts. Construction costs through September 1995 totaled $245,969,316 and operation and maintenance totaled $85,702,585. Through September 1995 the project had generated more than 59.88 billion kilowatt-hours of electrical energy. Revenues from the power sales by Bonneville Power Administration are returned to the U.S. Treasury to repay, with interest, construction, operation, and maintenance costs of the project.

Lower Granite Lock and Dam

Completed Multi-purpose Project (Walla Walla District) The dam is 107.5 miles upstream from the mouth of the Snake River at the head of Lake Bryan, created by Little Goose Lock and Dam. Construction started in 1965 and the project went into operation 10 years later. The dam is 100 feet high and 3,200 feet long. The combined structure consists of a single-lift navigation lock, spillway, powerhouse, non-overflow sections, and fish passageways. The lake allows commercial navigation to Clarkston and Asotin, and to Lewiston, Idaho. Under power generating conditions, the lake level will vary between elevations 733 and 738 at Lewiston and Clarkston. Levees were constructed to protect low-lying areas of Lewiston and North Lewiston. Lower Granite Lake behind the dam was filled in February 1975, and the navigation lock went into operation in June 1975. The powerhouse contains six 135,000-kilowatt generators. The units are capable of producing a total of 810,000 kilowatts. Through September 1995 the project generated a total of 51.39 billion kilowatt-hours of electricity. Revenues from the power sales by Bonneville Power Administration are returned to the U.S. Treasury to repay, with interest, construction, operation, and maintenance costs of the project. Project costs through September 1995 totaled $384,846,908 for construction and $110,328,532 for operation and maintenance. In 1995 more than 861,500 people visited the project and lakeside recreation areas. Commerce through the locks in 1995 totaled 2,415,283 tons.

Lower Monumental Lock and Dam

Completed Multi-purpose Project (Walla Walla District) This dam is 41.6 miles upstream from the river mouth at the head of Lake Sacajawea. It has a hydraulic head of 100 feet and an overall crest length of 3,800 feet. The project includes a navigation lock, spillway, powerhouse, two fish passage ways, and non-overflow concrete and earthfill sections. Lake Herbert G. West behind the dam has a surface area of about 6,600 acres and extends navigation upstream about 29 miles to Little Goose Lock and Dam. A total of 134,878 people visited the project and recreation areas along the lake in 1991. Commerce through the lock

amounted to about 3,923,746 tons in 1995. Power from the first of three 135,000-kilowatt generator units initially installed in the powerhouse went on line in May 1969. Installation of three additional 135,000-kilowatt units was completed in 1979, boosting generating capacity of the project to 810,000 kilowatts. Project construction costs through September 1995 total $265,258,974 for construction and $84,205,949 for operation and maintenance. Through September 1992, the project had generated 60.59 billion kilowatt-hours of saleable electrical energy. Revenues from power sales by Bonneville Power Administration are returned to the U.S. Treasury to repay, with interest, construction costs, as well as operation and maintenance costs of the project.

Palouse River, Pullman

Deauthorized Flood Control Project (Walla Walla District) Authorized by the Flood Control Act of 1944, the project would provide protection for the town of Pullman and vicinity by channel rectification and levee construction along 1.36 miles of the South Fork Palouse River and 0.42 miles of Missouri Flat Creek. Local interests were unable to meet requirements for street, railroad, and bridge modifications established by detailed planning. Therefore, the project was placed in an inactive category, with authorization to expire May 1, 1969 if sponsorship responsibility was not accepted. In April 1969, the city advised the Corps of its intent to meet sponsorship requirements, and requested reactivation of the authorization. They felt that, due to changed conditions and concepts, other means of flood protection should be considered. A restudy was made to determine if an economically justified and acceptable plan could be developed that would remain within the authorized project scope. A report recommending reclassification to active status was submitted to the Chief of Engineers in fiscal year 1975, and a restudy began in 1977. In 1981, the first of two proposed project presentations was made to the Pullman City Council. The Corps recommended that the project be placed in an inactive status because of marginal economic feasibility, and the administration's reluctance to fund marginal projects. The Council requested more time to consider its course of action. At a second council meeting in June 1982, they agreed that the project should not be pursued further. That recommendation was forwarded to the Chief of Engineers by the Corps' Walla Walla District. The project was deauthorized by the Water Resources Development Act of 1986 (Public Law 99-662).

Palouse River and Tributaries

Deauthorized Flood Control Project (Walla Walla District) The project, conditionally authorized by the Flood Control Act of 1950, subject to economic justification, would provide flood protection for urban and rural areas. Flood damages have been a problem at Garfield on Silver Creek and near Malden on Pine Creek. Planning funds to develop project details have not been appropriated. The project was deauthorized by the Water Resources

Development Act of 1986 (Public Law 99-662). A study of the Upper Palouse River Basin was initiated in fiscal year 1988. The purpose of the study is to evaluate various alternatives of providing municipal and industrial water for Moscow, Idaho; Pullman, Washington; Washington State University; and the University of Idaho. The study also considered opportunities to reduce flood damage in the communities of Pullman, Moscow, Potlatch, and Palouse. The study was completed in March 1989, and findings indicated no federal interest in continuing the project into feasibility.

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